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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT



(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. <b>PCT/KR2003/001791</b>	International filing date (day/month/year) <b>02 SEPTEMBER 2003 (02.09.2003)</b>	Priority date (day/month/year) <b>03 SEPTEMBER 2002 (03.09.2002)</b>
International Patent Classification (IPC) or national classification and IPC  <b>IPC7 G03F 7/027</b>		
Applicant  <b>KOLON INDUSTRIES INC. et al</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of \_\_\_\_\_ sheets.

## 3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  <b>13 OCTOBER 2003 (13.10.2003)</b>	Date of completion of this report  <b>22 DECEMBER 2004 (22.12.2004)</b>
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer  <b>KIM, Hyun Sook</b>  Telephone No. 82-42-481-5584 

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/001791

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

☒ the international application as originally filed

☐ the description:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

☐ the claims:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, as amended (together with any statement) under Article 19

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

☐ the drawings:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

☐ the sequence listing part of the description:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language English which is

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☒ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☐ the claims, Nos. \_\_\_\_\_

☐ the drawings, sheets \_\_\_\_\_

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

# INTERNATIONAL PRELIMINARY EXAMINATION

International application No.

PCT/KR2003/001791

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1 - 11	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 11	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 11	YES
	Claims		NO

### 2. Citations and explanations (Rule 70.7)

1. The application does meet the requirements of Art 33(2),(3) PCT since claim 1 is novel, and claims 2 - 11 are also novel, because they are dependent on claim 1.

2. Reference is made to the following documents:

D1: US 5,919,569 A

D2: US 4,822,705 A

D3: EP 770 923 A1

D4: EP 1 324 139 A2

#### 3. Novelty under Art. 33(2) PCT

The claim 1 of the present invention describes a resin composition for sandblast resist, which includes a) a binder polymer, b) an oligomer, c) a photoinitiator, and d) an additive. Especially, the composite, b) comprises i) one of a polyalkylene glycol mono(meta)acrylate, which is represented by a formulas I to IV, and ii) one of a polyalkylene glycol di(meta)acrylate, which is represented by a formulas V to VIII.

a) D1 describes the resin composition for film. Composites are a) a binder polymer, b) an oligomer, c) a photoinitiator, and d) an additive. But the composite, b) is a urethane(meta)acrylate.

b) D2 discloses an electrophotographic photoconductor, which contains only a polyalkylene glycol mono(meta)acrylate which is represented by a formulas I to IV as a composite.

c) D3 describes a photosensitive resin composition, which has a urethane (meta)acrylate compound containing two acryloyl or methacryloyl groups as a composite.

d) D4 discloses an electrophotographic photoconductor for film including an oligomer, which is a compound selected from polyalkyleneglycol monocarboxylic acid esters and polyalkyleneglycol dicarboxylic acid esters.

e) The D1 - D4 also disclose the oligomer, but it is not the same as the oligomer of the present invention. Therefore, claim 1 is novel. Since the claims 2 - 11 are dependent on claim 1, the claims 2 - 11 are also novel.

#### 4. Inventive Step under Art. 33(3) PCT

a) The skilled person would not have found an incentive to combine any of D1 and D2 to arrive at the claimed inventions because the prior art documents do not teach or fairly suggest any of the embodiments as specifically set forth in the present claims 1 - 11. Therefore, the claims 1 - 11 appear to involve an inventive step.

#### 5. Industrial Applicability under Art. 33(4) PCT

Claims 1 - 11 meet the criteria set out in PCT Article 33(4), because the claimed invention is directed to a resin composition for film of which the application is well known to be useful in semiconductor industry.